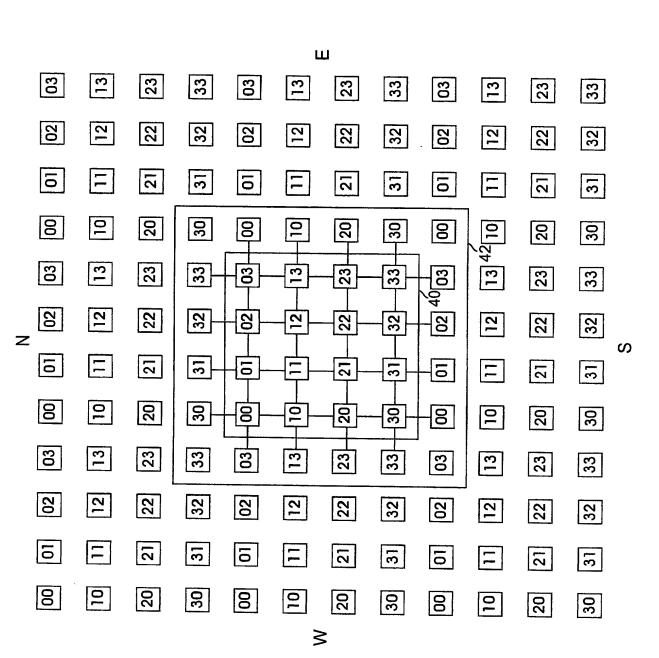


FIG. 3B



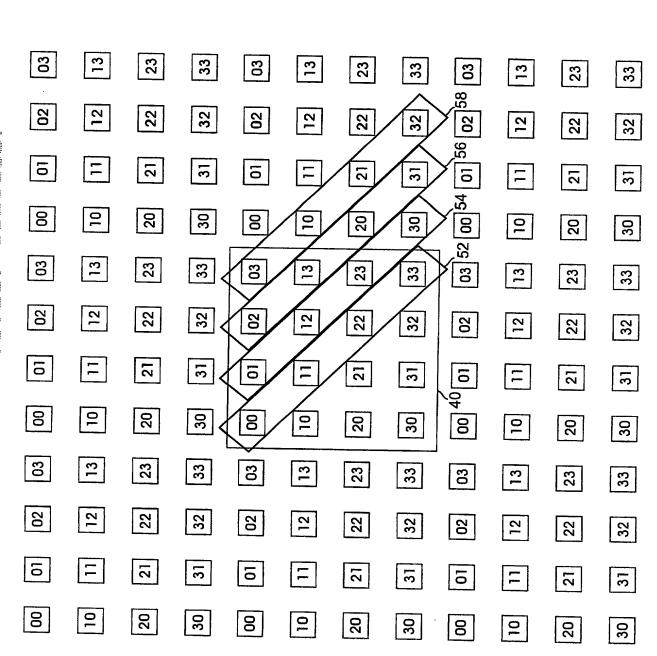


PIFER CLER CLERT

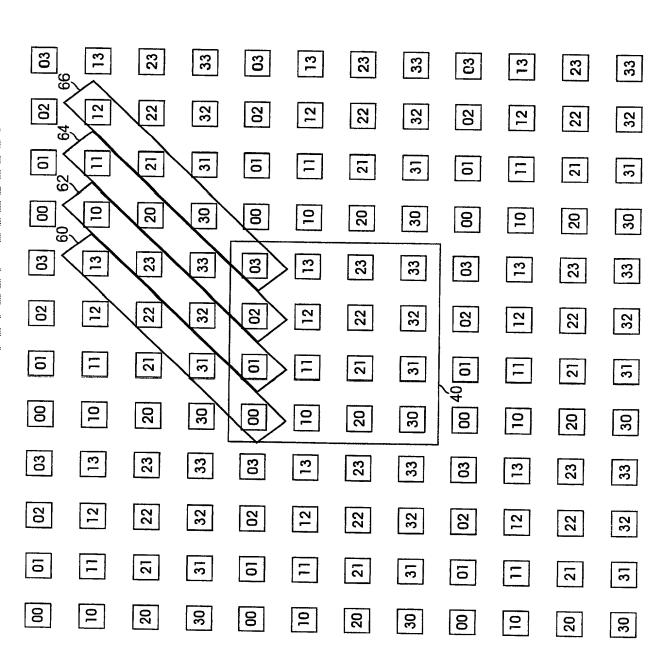
<b>5A</b>
(J)
Ĭ

03	13	23	33	03	13	23	33	03	13	23	33
03	12	22	32	05	12	22	32	05	12	22	32
0.1	=	21	31	0	_	21	31	10	Ξ	21	31
8	10	20	30	8	01	20	30	8	10	20	30
03	13	23	33	(a)	(E)	23	33	63	13	23	33
05	12	22	32	(E)	[2]	[2]	32	00	12	22	32
0	Ξ	21	3		E	(a)	(E)	[0]	Ξ	21	31
8	01	20	<u>ල</u>		P	(S)	(E)	000 40	10	20	30
03	13	23	33	8	[2]	[2]	(E)	303 50	13	23	33
05	12	22	32	05	[2]	[2]	(E)	02 48	12	22	32
0	Ξ	21	31	10	Ξ	[2]	(E)	1 01 6	=	21	3.1
8	10	20	30	8	10	20	80	00 44	10	70	30

<b>2B</b>
G
Ĭ



C
Ŋ
<u>ල</u>
正



<b>5D</b>
<b>©</b>
Ī

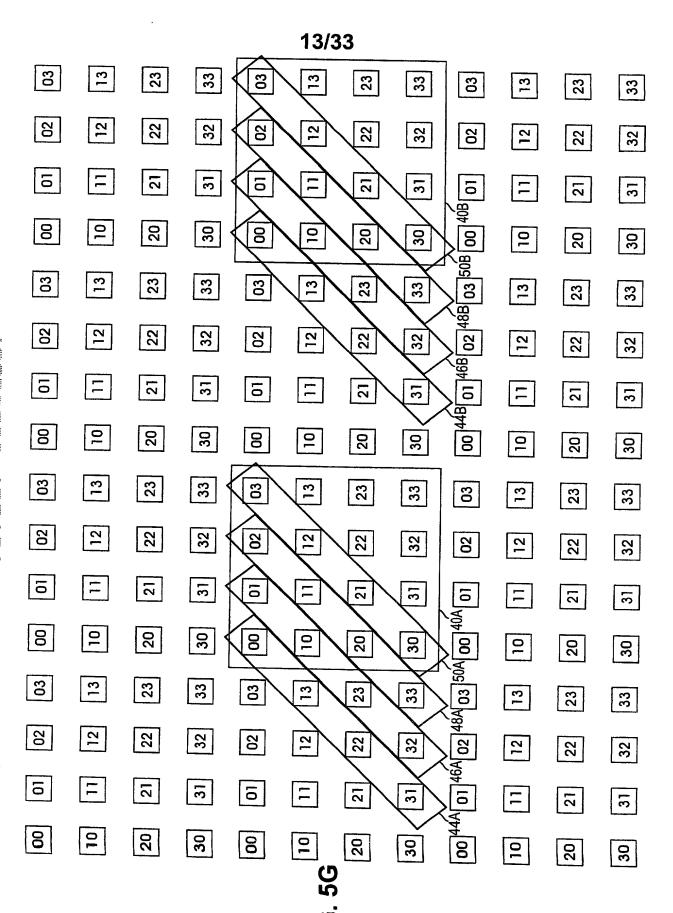
03	13	23	33	03	. 5	23	33	03	13	23	33
02	12	22	32	02	12	22	32	05	12	22	32
0	F	21	3	10	Ξ	51	31	10	Ξ	21	3]
8	10	20	30	8	10	8	9 8	8	10	20	30
03	13	23	33	(3)	13	23	33	83	13	23	33
05	12	[22]	[22]	(B)	12	22	32	05	12	22	32
0	F	N	(E)		=	21	31	[0]	Ξ	21	31
8		R	8		10	20	99	8	10	20	30
8	4 5	[2]	(E)	8	13	23	33	03	13	23	33
02	<u>2</u>	N	32	05	12	22	32	05	12	22	32
[0]		[2]	31	0	Ξ	21	31	[0]	Ξ	21	31
8	02	20	30	8	10	20	30	8	10	20	30

Ш
S
4.5
G
正

03	13	23	33	03	<u></u>	23	33	83	13	23	33
05	12	22	32	05	12	22	32	05	12	22	32
6	=	21	31	6	Ξ	21	18	10	Ξ	21	31
00	2	20	30	8		(R	9 8 8	8	10	20	30
03	13	23	33	89 4	(E)	[2]	8	8	13	23	33
05	12	22	32	8		[2]	[22]	[20]	12	22	32
0	=	21	31	6		(Z)	(E)	(E)	>E	21	31
8	0	8	30	00	<u>P</u>	(S)	(E)		- 10 51	20	30
03	13	23	33	03	13	23	(3)		1349	23	33
05	12	22	32	05	12	22	32	[3]	1247	22	32
[0]	=	21	31	0	=	21	<u>.</u>	[ <u>-</u>	11]45	21	31
00	10	20	30	8	10	20	30	8	10	20	30

<b>5F</b>
G.
正

03	13	23	33	03	13	23	33	83	13	23	33
02	12	22	32	05	12	22	32	02	12	22	32
0.1		21	<u>8</u>	10	=	[2]	(E)	01	Ξ	21	3]
00	10	20	9	8	[2]	R	8	8	10	20	30
03	13	23	33			[2]	(3)	03 65	13	23	33
02	12	22	32			(N	32	05	12	22	32
0	Ξ	21	31			(N)	3]	00	Ξ	21	31
00	10	20	<sub>ල</sub> <	(3)		[8]	(E)	300 40	2	20	30
03	13	23	33	8	[3]	R	(E)	03 63	13	23	33
05	12	22	32	05	12	R	[2]	\     	12	22	32
0	Ξ	21	31	01	Ξ	21	<u>E</u>	01 61		21	31
8	10	20	30	8	10	20	30	8	10	20	8



(	9
(	5
Ī	Ē

03	13	23	33	03	13	23	33	03	13	23	33
05	12	22	32	05	(E)	[2]	32	05	12	22	32
0	Ξ	21	31	01		( <u>2</u> )	<u>=</u>	0	Ξ	21	31
8	10	20	30	00		R	(B)	(8)	01	20	30
8	13	23	33	03		R	(8)	(E)	>=	23	33
02	12	22	32	[2]	[2]	(Z)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(E)	12 50	22	32
6	Ξ	21	3.	<u></u>	Ξ	[2]	E		148	[2]	31
8	10	20	30	8	10	20	8		1046	20	30
03	13	23	33	63	8	23	33	8	13 44	23	33
05	12	22	32	02	12	22	32	05	12	22	32
[0]	Ξ	21	33	10	=	21	31	[0]	=	21	3.1
8	10	20	30	8	10	20	30	8	10	20	30

02	12	22	02	12	22			22
0	7	2	0	7	21	5	7	21
8	10	20	00	10	20		10	20
05	12	22	8	12	22	02	12	22
5	7	21	E)		57	5	7	21
8	10	20	\$	⁄5⁄	6	8	10	20
02	12	52	8	5	3	02	12	22
5	7	21	0	7	( <u>2</u> )	2	7	21
00	10	20	00	10	20	00	10	20

FIG

0	4	24	9	14	24	04	14	Č
03	13	23	03	13	23	03	3	c
02	12	22	05	12	22	02	12	ç
01	7	21	5	7	21	01	7	7
00	10	20	00	9	20	00	10	20
9	4	24	\$	14	24	8	4	2
03	13	23	8	/ <del>⊑</del>	3	03 04	13	23
02	7	22	8	15	13	02		22
0	7	21	6	/ <del>=</del>	2/	01		2
00	10	23	9	<del>/5</del>	<b>2</b> /2	8	10	20
9	14	24	2/	14	<u>45</u>	9		
03	13	23	03	5	•	<u> </u>		
02	12	22	05	12	22 <	05	12	
01	=	21	01	7	21	01	=	21
00	10	20	8	10	20	00	10	

FIG. 8

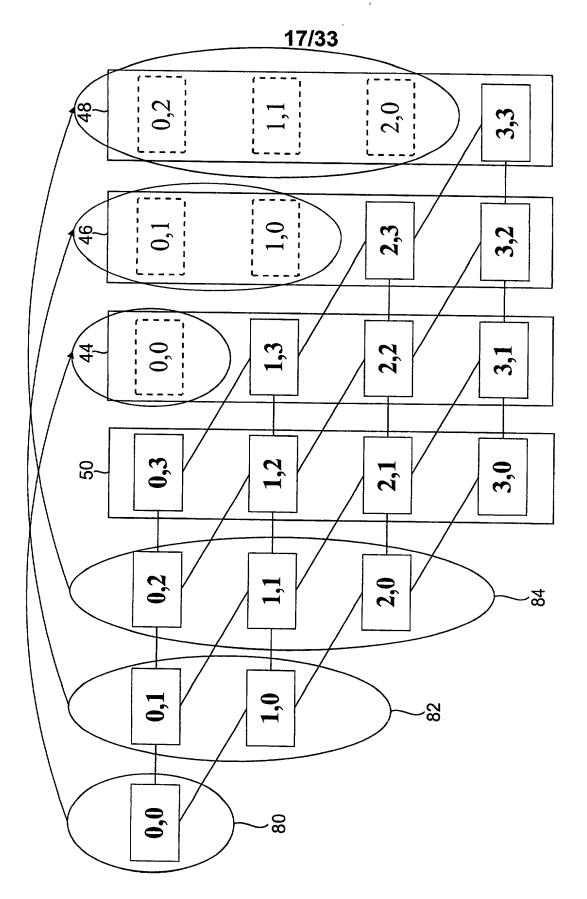
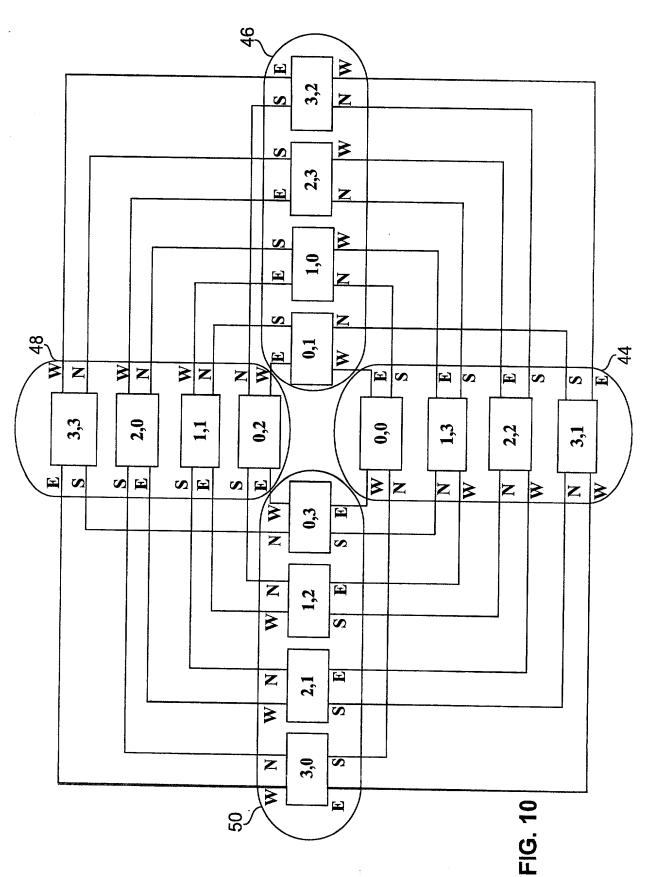
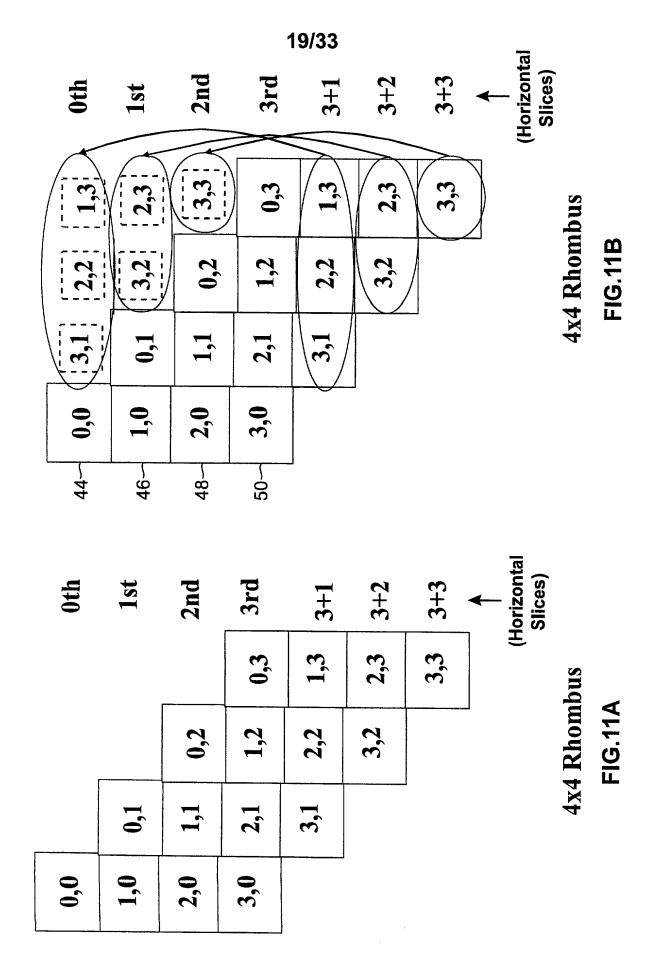
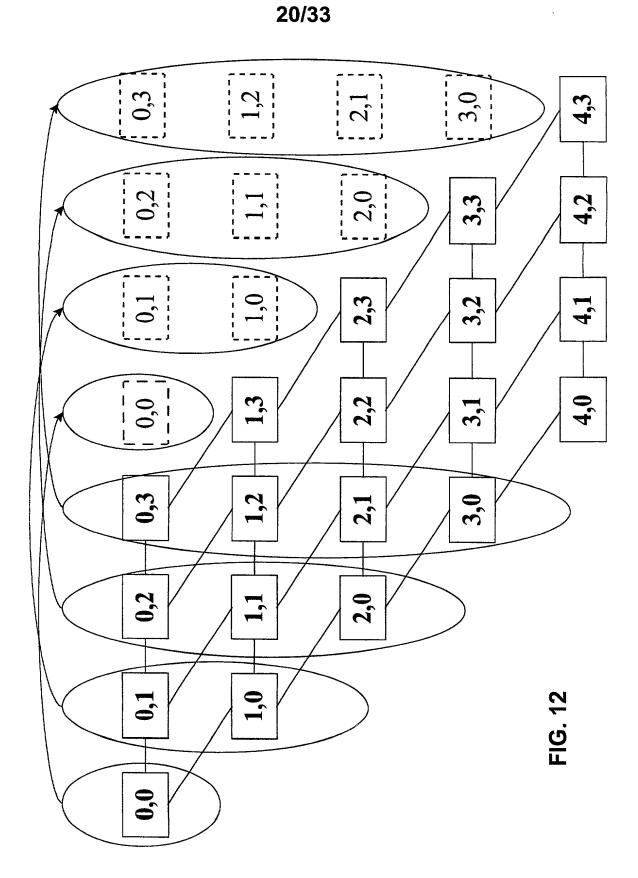
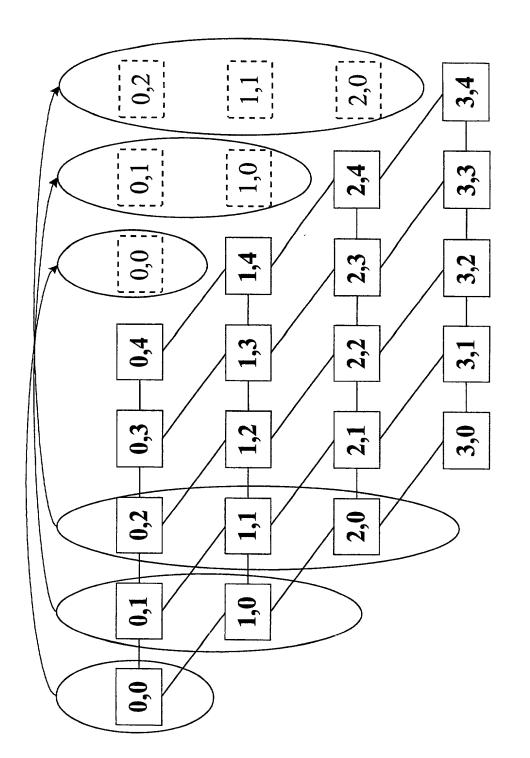


FIG. 9









21/33

FIG. 13

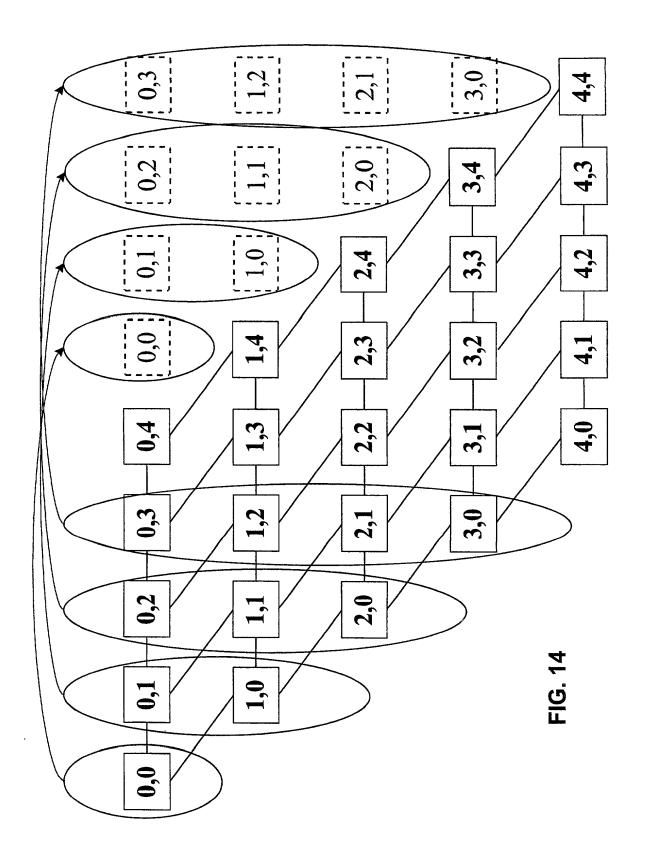
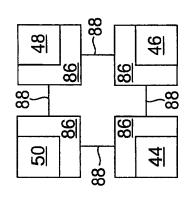
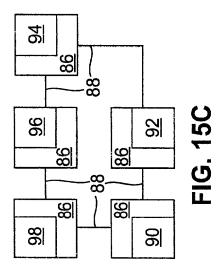
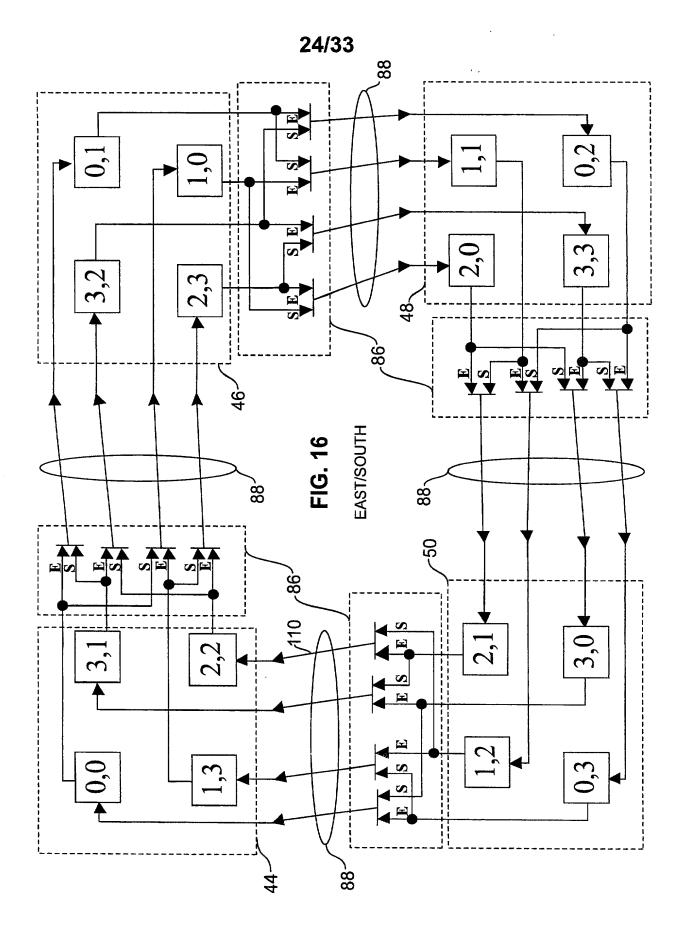


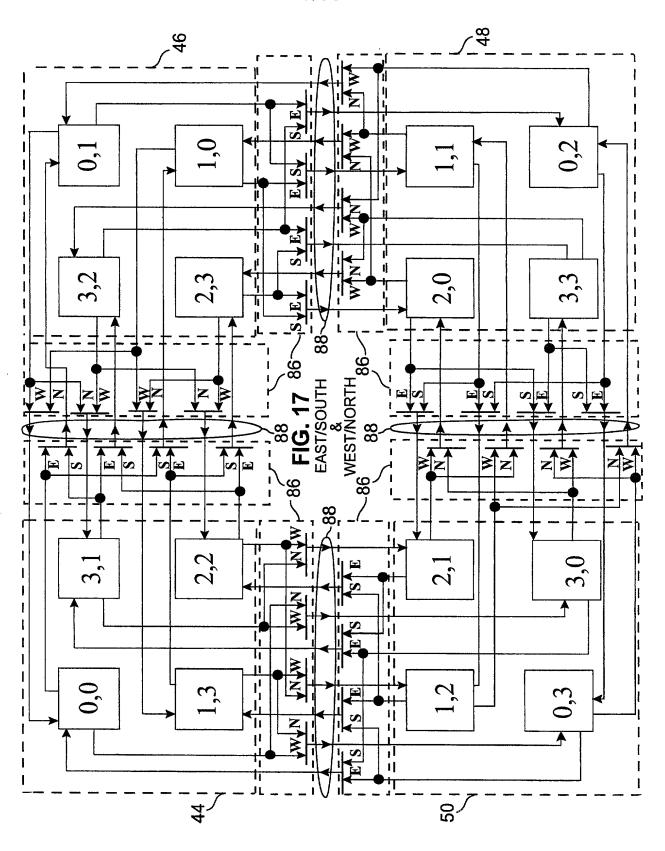
FIG. 15B



88 88 88 84 FIG. 15A







W0,0 W0,1 W0,2 W1,0 W1,1 W1,2 W2,0 W2,1 W2,2 CONVOLUTION WINDOW

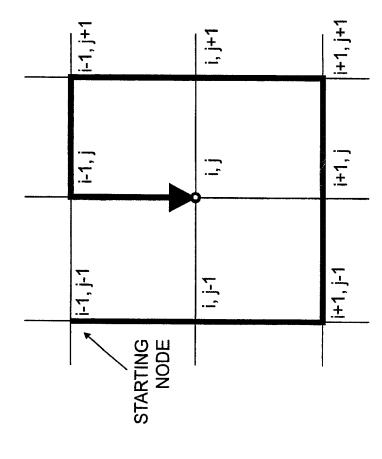


FIG. 19A

CONVOLUTION PATH FOR NODE i,j

FIG. 19B

P0,0 P0,1 P0,2 P0,3 P0,4 P0,5 P0,6 P0,7	
P0,1 P0,2 P0,3 P0,4 P0,5 P0,6	7,
P0,1 P0,2 P0,3 P0,4 P0,5 P0,6	P0
P0,1 P0,2 P0,3 P0,4	
P0,1 P0,2 P0,3	P0,5
P0,1 P0,2	P0,4
P0,1	P0,3
Ъ	P0,2
P0,0	P0,1
	P0,0

•	
-	
٠.	
4	

P2,0

P3,0

•	
P4,0	P4,4 P4,5 P4,6 P4,7
P5,0	P5,4 P5,5 P5,6 P5,7
P6,0	P6,4 P6,5 P6,6 P6,7
P7,0	P7,4 P7,5 P7,6 P7,7

28/33

1,3 P5,7 2,3 P6,7

1,1 P5,5 2,1 P6,5

2,2 P6,6

P6,4

2,0

1,2 P5,6

1,0 P5,4

P4,6

P4,5

29/33	
R01	$\begin{array}{c c} & & & & \\ & & & 1,1 \\ & & & 1,1 \\ & & & 1,1 \\ & & & & 1,1 \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ & & \\ & & \\ & \\ & & \\ &$
3,2 =0+ P7,6 R0 <sup>1</sup> 7,6 <sup>22</sup> 7,6 <sup>22</sup> 7,6 <sup>22</sup> 7,00 80 <sup>1</sup> 86,7 80 <sup>1</sup> 86,7	2,0 1 = 0+ 0P6,4 0P6,4 0P6,4 0P6,4 0P6,4 0P7,7 0P7,7 0P7,7 0P7,7
21   R0=R   R0=R   R0=R   R1=P   R0=R   R1=P   R0=R   R0=R	END OF STEP 1
$\begin{array}{c} 3,1 \\ 3,1 \\ R01=0 \\ W00P7, \\ R0=R0^1 \\ R1=P7,5 \\ R2=W00 \\ SWITCHE \\ 2,2 \\ R0=R0^1 \\ W00P6,6 \\ R0=R0^1 \\ R1=P6,6 \\ R1=P6$	EN E
$\begin{array}{c} 0,0 \\ R0^{1}=0+\\ W000P4,4 \\ R0=0+\\ R2=W00 \\ \textbf{CLUSTER} \\ 1,3 \\ R2=W00 \\ \textbf{K}1=P4,4 \\ R2=W00 \\ \textbf{K}1=P5,703 \\ R1=P5,703 \\ R2=W00 \\ \textbf{K}2=W00 \\ \textbf$	R0 <sup>1</sup> =0+ W00P5,6 R0=R0 <sup>1</sup> R1=P5,602 R2=W00 CLUSTER 0,3 R0 <sup>1</sup> =0+ W00P4,7 R0=0 R1=P4,7 R2=W00
SWITCHES R0=0 R1=P4,5 R2=0 1,0 R0=0 R1=P5,4 R2=0	1,1   R0=0   R1=P5,5   R2=0   R0=0   R1=P4,6   R2=0   R2
1	CLUSTER 8  R0=0 R1=P6,4 R2=0 R1=P7,7 R2=0 R1=P7,7 R2=0
88 86 86	S 88 86
SWITCHES R0=0 R1=P7,5 R2=0 2,2 R0=0 R1=P6,6 R2=0	SWITCHES R0=0 R1=P6,5 R2=0 3,0 R0=0 R1=P7,4 R1=P7,4
R0=0 R1=P4,4 R2=0 R1=P5,7 R2=0 R2=0	CLUSTER S  R0=0 R1=P5,6 R2=0 0,3 R0=0 R1=P4,7 R2=0

$ \begin{array}{c c} & 3.2 \\ 180^3 - 80^2 \\ 180^3 - 80^2 \\ 180^3 - 80^3 \\ 180 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 80^3 \\ 181 - 8$	R0=0 722 R1=P5,4 0 R2=W20 	$\begin{bmatrix}  & & & & & & & & & & & & & & & & & & &$
88 98	ROADCAS	20   R0 <sup>3</sup> = R0 <sup>2</sup>   R0 <sup>3</sup> = R0 <sup>2</sup>   R0 = 0   R1 = P6,4   R2 = W20   R1 = P6,4   R2 = W20   R2 = R0 <sup>2</sup>   R0 <sup>3</sup> = R0 <sup>3</sup>   R0 <sup>3</sup>
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c} & R0 = R0^{3} \\ & R1 = P5, 7^{12} \\ & R1 = P6, 6^{21} \\ & R2 = W20 \\ & R2$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c c} & 0,1 & - \\ & R0^2 = 0 + \\ & W10P4,5 \\ & W10P4,5 \\ & R0 = 0 \\ & R1 = P4,5 \\ & R2 = W10 \\ & R2 = W10 \\ & R0^2 = R0^1 \\ & + W10P5,400 \\ & & \\ \end{array} $	R0=R0 <sup>2</sup>   R1=P5,400   R2=W10	$\begin{bmatrix} -1 & 1 & 1 \\ R0^2 = R0^1 \\ +W10P5,501 \\ R0 = R0^2 \\ R1 = P5,501 \\ R2 = W10 \\ R2 = W10 \\ W10P4,6 \\ W10P4,6 \\ R0 = 0 \\ W10P4,6 \\ R0 = 0 \\ R1 = P4,6 \\ R2 = W10 \\ R3 = W10 \\ R4 = W10 \\ R4 = W10 \\ R4 = W10 \\ R5 = W10 \\ R5$
$ \begin{array}{c c} & 3.2 \\ & 1_{R0}^2 = R_0^1 \\ & + W_{10} P_{7}, 6^{22} \\ & R_1 = P_7, 6^{22} \\ & R_2 = W_{10} \\ & CLUSTER \\ & + W_{10} P_{6,7} \\ & + W_{10} P_{6,7} \\ \end{array} $	R0= R0 <sup>2</sup>	$ R_{0}^{2} = R_{0}^{1}$ $ R_{0}^{2} = R_{0}^{1}$ $ R_{0}^{2} = R_{0}^{2}$
8 S	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

i

1_8= 31/3	3,
$\begin{array}{c c} & 0.1 \\ R0^5 = R0^4 \\ +W22P4,5 \\ R0 = R0^5 \\ R1 = P4,5 \\ R2 = W22 \\ SWITCHE \\ R0^5 = 0 \\ +W22P5, \\ R0 = R0^5 \\ R1 = P5,4^2 \\ R2 = W22 \\ R2 = W22 \\ R3 = R0^5 \\ R4 = R2 \\ R2 = W22 \\ R4 = R2 \\ R5 = W22 \\ R6 = R2 \\ R6 = R2 \\ R7 = R2 \\ R7 = R2 \\ R8 = R2 \\ R8 = R2 \\ R8 = R3 \\ R9 = R4 \\ R9 = R4 \\ R1 = R4 \\ R2 = R2 \\ R1 = R4 \\ R2 = R4 \\ R2 = R4 \\ R2 = R4 \\ R3 = R4 \\ R4 = R4 \\ R4 = R4 \\ R4 = R4 \\ R5 = R4 \\ R5 = R4 \\ R5 = R4 \\ R6 = R4 \\ R7 = R4 \\ R6 = R4 \\ R7 = R$	$\begin{array}{c c} & & & & \\ R0^5 = R0^4 \\ +W22P5, \$l0 \\ R0 = R0^5 \\ R1 = P5, \$2^1 \\ R2 = W22 \\ R2 = W22 \\ R2 = R0^4 \\ +W22P4, 6^{01} \\ R0 = R0^5 \\ R1 = P4, 6^{12} \\ R1 = P4, 6^{12} \\ R2 = W22 \\ \end{array}$
$ R_0 ^2 = R_0^4 + W_2 + R_0^2 = R_0^4 + R_0^2 + R_0^2 = R_0^4 + R_0^2 + R_0^2 = R_0^4 + R_0^2 = R_0^5 + R_0^5 + R_0^5 = R_0^5 + R_0^5 + R_0^5 = R_0^5 + R_0^$	R05=0 +W22P6,4 +W22P6,4 R0=R05 R1=P6,430 R1=P6,430 R2=W22 CLUSTER 3,3 3,3 R05=R04 +W22P7,732 R0=0 R1=P7,7 R2=W22
88 86 ROADCA ALCULA ND R0 <sup>5</sup>	88 86 FIG. 22B
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{bmatrix} R_0^5 = R_0^4 \\ +W22P_6,520 \\ +W22P_6,520 \\ R_1 = P_6,531 \\ R_2 = W22 \\ \hline SWITCHES \\ 3,0 \\ R_0^5 = 0 \\ +W22P_7,4 \\ R_0^5 = 0 \\ +W22P_7,4 \\ R_1 = P_7,4 \\ R_2 = W_2 \end{bmatrix}$
0,0 R05=0+ W22P4,4 R0=R05 R1=P4,4 <sup>10</sup> R2=W22 CLUSTER 1,3 R05=R04 +W22P5,7 <sup>12</sup> R0=R05 R1=P5,7 <sup>23</sup> R1=P5,7 <sup>23</sup>	R05=R04  +W22P5,611   R0=R05   R1=P5,622   R2=W22   R2=W22   R05=R04  +W22P4,702   R0=R05   R1=P4,713   R2=W22
1	
Total   R04   R04   R04   R0   R0   R0   R0	R04=R03 R04=R03 R0=R04 R1=P5,510 R2=W21 SWITCHES 0,2 R04=R03 +W21P4,601 R0=R04 R1=P4,601 R1=P4,601 R2=W21
22 33 33 4 4 4	4=0 1P6,4 =0 =0 P6,4 W21 3,3 3,3 P7,732 P7,732 V21
R04= F   R04= F   R04= F   R04= F   R0= R   R1=P   R0= R   R1=P   R0= R   R04= R   R04= R   R04= R   R0= R	Pic 88
$\begin{array}{c} -3.1 \\ R0^{4} = R0^{3} \\ +W21P7,5 \\ R0 = R0^{4} \\ R1 = P7,5^{3} \\ R2 = R0^{4} \\ R1 = P6,6^{2} \\ R2 = W21 \\ R2 = W21 \\ R2 = W21 \\ R2 = W21 \\ R3 = W21 \\ R4 = R0^{4} \\ R4 = R0^{4} \\ R6 = R0^{4} \\ R6 = R0^{4} \\ R1 = P6,6^{2} \\ R1 = P6,6^{2} \\ R2 = W21 \\ R2 = W21 \\ R3 = W31 \\ R4 = $	R04=R03   +W21P6,520   +W21P6,520   R0=R04   R1=P6,520   R2=W21   SWITCHES   3,0   +W21P7,4   R0=0   R0=0   R1=P7,4   R2=W21   R2=W21
$\begin{array}{c} 0,0 \\ R0^4 = 0+ \\ W21P4,4 \\ R0 = 0 \\ R1 = P4,4 \\ R2 = W21 \\ R1 = P4,4 \\ R2 = W21 \\ R1 = P4,4 \\ R2 = W21 \\ R1 = P5,712 \\ R2 = W21 \\ R2 = $	R04= R03  +W21P5,611   R0= R04   R1=P5,611   R2=W21   R2=W21   R04= R03  +W21P4,702   R0= R04   R1=P4,702   R1=P4,702   R2=W21

1			32/33	,	- <u>-</u>	<u>.                                    </u>		
R0 <sup>7</sup> = R0 <sup>6</sup> +W02P4,5 <sup>1</sup> 1 R0= R0 <sup>7</sup> R1=P4,5 <sup>0</sup> 2 R2=W02 SWITCHES	$1,0$ $R0^7 = R06$ $+W02P5,4^{20}$	R0=R0 <sup>7</sup> R1=P5,4 <sup>11</sup> R2=W02	88	$\begin{bmatrix} - & 1 & 1 \\ R0^2 = R0^6 \\ +W02P5,521 \end{bmatrix}$	R0= R0 <sup>7</sup>   R1=P5,5 <sup>12</sup>   R2=W02   R2=W02	0,2 R0 <sup>7</sup> = R0 <sup>6</sup> +W02P4,6 <sup>12</sup>	$R0=R0^{7}$ $R1=P4,6^{03}$ R2=W02	
$ \begin{bmatrix}                                    $	$2,3$ $R0^7 = R0^6$ $+W02P6,7^{33}$	R0=0 R1=P6,7 R2=W02	CAST W02 LATE R07 07 WEST	$\Gamma = 2.0$ $1 \text{ R0}^7 = \text{R0}^6$ 1 + W02P6, 430	R0=R0 <sup>7</sup> R1=P6,4 <sup>2</sup> 1 R2=W02		R0= 0 R1=P7,7 R2=W02	
88	98		BROADCAST W02 CALCULATE R0 <sup>7</sup> SEND R0 <sup>7</sup> WEST END OF STEP 7		88	98		FIG. 23B
$ \begin{array}{c c} & 3,1 \\ & 80^7 = 0 \\ & + \text{W02P7,5} \\ & + \text{W02P7,5} \\ & & \text{R0} = \text{R0}^7 \\ & & \text{R1} = \text{P7,5}^3 2 \\ & & \text{R2} = \text{W02} \\ & & \text{SWITCHES} \\ \end{array} $	$ \begin{array}{c} 2,2 \\ R0^7 = R06 \\ +W02P6,6^{32} \end{array} $		88	$R0^{7} = 2.1$ $R0^{7} = R0^{6}$ +W02P6,531	7/	$3.0$ $R0^{7} = 0$ $+W02P7,41$	$R0 = R0^{7}$ $R1 = P7, 4^{31}$ R2 = W02	\
$ \begin{bmatrix} - & 0.0 \\ R0^2 = R0^6 \\ HW02P4, 4^10 \\ HW02P4, 4^10 \\ R0 = R0^7 \\ R1 = P4, 4^01 \\ R2 = W02 \\ CLUSTER S $	$1,3$ $R0^7 = R0^6$ $+ W02P5,7^{23}$	R0=0   R1=P5,7   R2=W02		$\Gamma = 1.2$ $1R0^{7} = R0^{6}$ $1 + W02P5, 6^{22}$	R0= R0 <sup>7</sup> R1=P5,613 R2=W02		R1=P4,7 R2=W02	,     
$\begin{bmatrix} -0,1 \\ R0^6 = R0^5 \\ +W12P4,511 \\ R0 = R0^6 \\ R1 = P4,511 \\ R2 = W12 \\ SWITCHES \end{bmatrix}$	1,0 1 $R0^6 = R0^5$ 1 $+W12P5,4^20$	R0= R06 R1=P5,420 R2=W12		$\begin{bmatrix} -1,1\\ R0^{6} = R0^{5}\\ +W12P5,5^{21} \end{bmatrix}$	R0= R0 <sup>6</sup>   R1=P5,5 <sup>21</sup>   R2=W12   WITCHES	$0,2$ $R0^6 = R0^5$ $+W12P4,6^{12}$	$R0 = R0^6$ $R1 = P4,6^{12}$ R2 = W12	
S .								
3,2     R06=0   +W12P7,6   R0= 0   R1=P7,6   R2=W12   R2=W12	$^{2,3}_{ R0^6=R0^5 +W12P6,733}$	$\begin{array}{c} 1 \text{ R0= R0}^{6} \\ 1 \text{ R1=P6}, 7^{33} \\ 1 \text{ R2=W1}^{2} \end{array}$	BROADCAST W12 CALCULATE R06 SEND R06 NORTH END OF STEP 6	$\frac{2.0}{1 \text{ R0}^6 = \text{R0}^5}$ $1 \text{ W12P6}, 4^{30}$	R0= R0 <sup>6</sup> R1=P6,4 <sup>30</sup> R2=W12	3,3 R0 <sup>6</sup> =0 +W12P7,7	R0= 0   R1=P7,7   R2=W12	∢
88	98		BROADCAST W12 CALCULATE R0 <sup>6</sup> SEND R0 <sup>6</sup> NORTH END OF STEP 6		88	98		FIG. 23A
- RI	$^{2,2}_{R0^6=R0^5}$ +W12P6,6 <sup>32</sup>	$\begin{bmatrix} R0 = R0^6 \\ R1 = P6, 6^{32} \\ R2 = W12 \end{bmatrix}$	BE C C E E E	$\frac{2,1}{R0^6 = R0^5}$ +W12P6,5 <sup>31</sup>	R0= R0 <sup>6</sup> R0= R0 <sup>6</sup> R1=P5,6 <sup>21</sup> R1=P6,5 <sup>31</sup> R2=W12 R2=W12 CLUSTER SWITCHES	$3.0$ $R0^6 = 0$ $W12P7,4$	$\begin{bmatrix} R0 = 0 \\ R1 = P7, 4 \\ R2 = W12 \\ \end{bmatrix}$	ш.
$ \begin{bmatrix} - & 0, \overline{0} \\ R_0^6 = R_0^5 \\ + W_{12}P_{4,4} \\ R_0 = R_0^6 \\ R_1 = P_{4,4} \\ R_2 = W_{12} \\ CLUSTER S \end{bmatrix} $	$\begin{array}{c} 1.3 \\ R0^6 = R0^5 \\ +W12P5,723 \end{array}$	$  R0 = R0^6$ $  R1 = P5, 7^{23}$   R2 = W12		$1, \frac{1}{2}$ $1R06 = R05$ $1+W12P5, 6^{22}$	R0= R0 <sup>6</sup>   R1=P5,6 <sup>22</sup>   R2=W12   CLUSTER	$\begin{array}{c} 0,3\\ R0^6 = R0^5\\ +W12P4,7^{13} \end{array}$	R0= R0 <sup>6</sup>   R1=P4,7 <sup>13</sup>   R2=W12	

$ \begin{array}{c c}  & 3.2 \\  & 180^{9} = 80^{8} \\  & 1+W11P7,6^{22} \\  & 1+W11P7,6^{22} \\  & 1+W11P4,5 \\  & 180 = 80^{9} \\  & 181 = P7,6^{32} \\  & 181 = P7,6^{32} \\  & 181 = P4,5^{01} \\  & 182 = W11 \\  & 182 = $	<u></u>	$  R0=R0^{2} $ $  R1=P6,7^{23} $ $  R1=P5,4^{10} $ $  R2=W11 $ $  R2=W11 $	BROADCAST W11 CALCULATE R09 END OF STEP 9	$\begin{bmatrix} -2.0 \\ R0^{9} = R0^{8} \\ +W11P6,4^{10} \end{bmatrix} + W11P5,5^{01}$	R0=R09   R1=P6,420   R2=W11	<b>%</b>	$  R0=R0^9 = R0=R0^9 = R1=P7,7^3 = R1=P4,6^{02} = R2=W11$	
$ \begin{array}{c c} \hline -0.0 \\ \hline R0^9 = 0 \\ \hline +W11P4,4 \\ \hline +W11P7,521 \\ \hline R0 = R0^9 \\ \hline R1 = P4,400 \\ \hline R1 = P4,400 \\ \hline R2 = W11 \\ \hline R2 = W11 \\ \hline R2 = W11 \\ \hline \end{array} $	8	$  \begin{array}{c c} KO=KU^{-1} \\   \begin{array}{c c} KI=P5, 7^{13} \\   \begin{array}{c c} KI=P6, 6^{22} \\   \begin{array}{c c} K2=W11 \\   \begin{array}{c c} \end{array} \end{array}  $	BROAI  -88 CALC  END G	$\begin{bmatrix} -7 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.0 & -1.2 \\ 1.$	R0=R0 <sup>9</sup>	0,3 3,0 R0 <sup>9</sup> =0 R0 <sup>9</sup> = R0 <sup>8</sup> 86 +W11P4,7 +W11P7,4 <sup>20</sup>	$\begin{array}{c c} R0=R0^9 \\ R1=P4,7^{03} \\ R2=W11 \\ \end{array} \begin{array}{c c} R0=R0^9 \\ R1=P7,4^{30} \\ R2=W11 \\ \end{array}$	i
$ \begin{array}{c c}                                   $	2,3 R0 <sup>8</sup> =0 +W01P6,7	01	CALCULATE R08 SEND R08 SOUTH END OF STEP 8		$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		$  R0 = R0^8 $ $  R0 = 0$ $  R1 = P7,7^{23}$ $  R1 = P4,6$   R2 = W01 $  R2 = W01$	4A
$ \begin{array}{c c}                                   $	<del></del>	R2=W01	88	$ R0^8 = R0^7$ $ R0^8 = R0^7$ $ +W01P5,6^{13}$ $ +W01P6,5^{22}$	R0= R0 <sup>8</sup>		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	FIG. 24A